

REMARKS

The remainder of this Amendment is set forth in appropriate subheadings for the convenience of the Examiner.

Rejection of Claims Under 35 U.S.C. § 112, First and Second Paragraphs

Claims 40, 42 and 44 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the Written Description requirement. Claim 44 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 40, 42 and 44 have been cancelled, thereby obviating the basis for their rejection under 35 U.S.C. § 112.

Rejection of Claims Under the Judicially-Created Doctrine of Obviousness-Type Double Patenting

Claims 1-8, 12, 13 and 36-39 stand provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over Claims 27 and 31-39 of co-pending application number 10/804,847.

It is believed that, with the amendments to the claims, this application is in condition for allowance but for the provisional double patenting rejection. Therefore, pursuant to the Manual of Patent Examining Procedure (MPEP) Section 1504.06, Applicants respectfully request withdrawal of the provisional rejection to thereby permit this application to issue as a patent.

Rejection of Claims Under 35 U.S.C. § 102(e)

Claims 36, 38, 39, 41, 45, 47, 48, 50, 51, 56 and 57 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2003/0183080 A1 by Mundschau (hereinafter, "Mundschau"). In particular, the Examiner stated that Mundschau teaches a hydrogen transport membrane comprising a first porous layer (12) that can be metallic, a solid deposition layer of a hydrogen-permeable material (14) disposed on and in contact with the porous layer, and a catalyst layer (16B) bound to the solid layer adjacent to the porous layer.

The Examiner further stated that the solid layer disclosed in Mundschau can be a Pd or a V alloy, and the porous layer can be made of a hydrogen diffusive material that is the same material as the solid layer. Further, the Examiner stated that the layers taught by Mundschau can be formed as a tube and hydrogen can be purified by passing it through the membrane.

Applicants have amended independent Claims 36, 47, 51 and 56 to include the additional limitation of a porous base layer supporting the first porous layer. There is no disclosure or suggestion in Mundschau of a hydrogen gas separator, its method of manufacture or use wherein the hydrogen gas separator includes, in addition to a first porous layer made from a hydrogen permeable material and a dense hydrogen-selective membrane in contact with the first porous layer, a porous base layer supporting the first porous layer. Therefore, independent Claims 36, 47, 51 and 56, and remaining claims dependent from them, meet the requirements of 35 U.S.C. § 102(e) in view of Mundschau. Applicants respectfully request withdrawal of this rejection.

Allowable Subject Matter

Applicants acknowledge the Examiner's statement of allowance of Claims 15-35.

With respect to Claims 9-11, 14, 37, 46, 49, 54 and 55, which the Examiner objected to as being dependent upon a rejected base claim, it is believed that, with withdrawal of the provisional obviousness-type double patenting rejection of Claims 1-8, 12, 13 and 36-39, the basis for objection to the remaining claims dependent from them is obviated. Withdrawal of the objection to these claims is respectfully requested by Applicants.

Information Disclosure Statements

Applicants filed a Supplemental Information Disclosure Statement (IDS) on January 31, 2005, but have not received an acknowledgement copy of page 3 of the Supplemental IDS. Applicants respectfully request that the Examiner consider the provisional patent application cited therein and provide an initialed copy of page 3 of the January 31, 2005, Supplemental IDS in the next correspondence.

In addition, Applicants are submitting herewith an additional Supplemental Information Disclosure Statement. Applicants request that the Examiner consider the references cited in this new IDS.

SUMMARY AND CONCLUSIONS

Claims 37, 40, 42-44, 49 and 52-54 have been cancelled. The remaining pending claims have been amended, as necessary, to overcome the rejections under 35 U.S.C. § 102 (e) in view of Mundschau. With the Examiner's withdrawal of the provisional rejection of claims under the doctrine of obviousness-type double patenting, the application is believed to be in condition for allowance. If the Examiner believes that an additional telephone conference would expedite prosecution of this application, he is invited to call Applicants' undersigned attorney.

Respectfully submitted,

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